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ABSTRACT

In this interdisciplinary curriculum unit intended for ninth grade students, students explore in groups in a role playing format public policy questions related to rain forests. Examined in the lessons are political, economic, and ecological issues from which students are expected to make recommendations on what policy course should be followed. Students are provided background information, detailed instructions, on-line resources, and reflection questions. The teacher's section describes the unit's purpose, its correlation to standards, and how to conduct the lessons, including management and assessment tips. (RJC)

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Schools of California Online Resources for Education (SCORE): Connecting California's Classrooms to the World

The Study Commission on the Rain Forest

9th Grade Lesson by Toby Erikson

SCORE
San Bernardino County Superintendent of Schools
601 North E. Street
San Bernardino, CA 92410-3093

http://score.rims.k12.ca.us/activity/rainforest/index.html

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The Study Commission on the Rain Forest

by

Toby Erickson

Dear Rain Forest Study Commission Member:

The rain forest is a beautiful place, teeming with life and an abundance of natural resources. The rain forest is also disappearing at an alarming rate. This is caused by those who wish to make use of the natural resources and vast land area which the rain forest holds. Farmers cut down forested areas to make room for cattle and crops. Miners dig in the rain forest to find diamonds and gold. Rivers are dammed to create reservoirs and hydroelectric power. What will happen to the world if the rain forest continues to disappear? What will happen if farmers, miners and other developers are required to stop harvesting the resources of the rain forest? Who should take charge and have the authority to answer these questions? What action should be taken?

We have commissioned your classroom with this task. You will work in small groups and as a class to explore and answer these questions. There will be much discussion and debate as you seek to find the answers. You'll find there is seldom an answer which can please everyone. We look forward to reading your conclusions as you share your findings at the end of this unit.

Sincerely,

The United Nations

FOLLOW THESE STEPS CAREFULLY AS YOU PROCEED THROUGH THIS ACTIVITY:

THE TASK

THE PROCESS

RESOURCES

LEARNING ADVICE

EVALUATION

CONCLUSION

REFLECTION

NOTES TO THE TEACHER

THE TASK:

You will work in a small group and will carefully research the issues of the rain forest. Using the Rain Forest: Hyperstudio Stack, you will consider the opinions of the many people who have interests in the rain forest. These people have written letters to you, The Study Commission on the Rain Forest. Consider these questions as you read the letters of these people:

- 1. What is this person's interest in the rain forest?
- 2. Is the activity in which this person is taking part harmful to the rain forest

environment?

- 3. What would happen if this person was allowed to continue this activity in the rain forest?
- 4. What would happen if this person was forced to stop this activity?
- 5. In your opinion, does this person have a true claim to the resources of the rain forest?

Discuss these questions as a class. Allow brief discussion to clarify the issues surrounding each letter. Put a piece of chart paper up in the room with the title: Rain Forest Issues

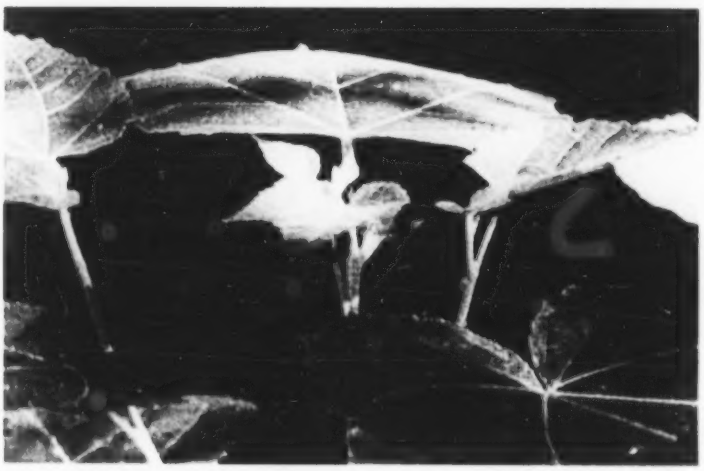
Work as a class to create a title for the issue each letter addresses (i.e. mining in the rain forest.)

Write these titles on the chart paper for later reference. The issues titles may include:

- Global warming
- Tribal people being crowded out
- Trees for hamburger?
- Mining in the rain forest
- Sovereignty of nations

Next, display two new sheets of chart paper with the titles: What we know....
What we need to know.....

Work as a class to define these issues and to decide what other information you may need.



THE PROCESS:

Follow these steps carefully:

A. Your group should begin by dividing up the research tasks. To do this you need to get into smaller groups. To select subcommittees to research the needed information a lot system works well. All the students in your class should write their names on a slip of paper and put it in the "hat" which represents the issue they wish to study. For example: a Indian hat for students interested in researching indigenous peoples, a mining hat for students interested in that issue. Draw names from a hat. If there are names which are not drawn, allow these students to pick their next choice they would like to study. Continue until all names are drawn.

B. With the the subcommittees selected, take some time to meet with others in your group to discuss strategies for finding the needed information. You will be given time in class to research your issue using whatever references to which you have access and the Internet.

C. As you do your research, look for information which will help you answer the questions which pertain to your group's issue from the above list and the Need to Know chart in your classroom. Keep track of where you got your information, take good notes, and always be ready to share.

D. After you have gathered the information:

- work to create a presentation of your findings to the class (poster, multimedia, short written briefing).
- contribute to a class bulletin board which could display the various components, issues, animals, products of, and people of the rain forest.
- participate in a daily debriefing in which students discuss any findings of their subcommittees. Display new findings on your growing **What we know...** chart. New questions and issues can be recorded on the **What we need to know.....** chart.
- participate in a "Oprah-Donahue" style debate in which your teacher will play the host. Air out differences of opinion with the rule: "Only if you have the mike can you speak". Use an old newspaper or piece of plastic pipe for a microphone. Your debate can include guests who are actually classmates playing the role of the various people who have interest in the rain forest.

After some discussion and debate, have your class vote for one of the proposed solutions listed in the Rain Forest: Hyperstudio Stack. Read the newspaper articles to see the consequences of your decision. If there is time, consider the other proposed solutions listed in the Rain Forest: Hyperstudio Stack. The proposed solutions are the following:

Generally, the solutions fall into three categories:

1.Preserve all Rain Forests

This solutions cuts off all harvesting of rain forest products except for indigenous people (who take only what they need) and scientists (who take only what they need for research).

2.Create Rain Forest Reserves

This allows for some rain forest areas to be open to harvesting while protecting certain areas, particularly those areas with indigenous people.

3.Allow Nations to Decide for Themselves.

This option assumes each nation will do what is best for their own country. Each country can choose to create reserves or do whatever they feel would be in their own best interests.

RESOURCES:

There are many resources on the World Wide Web about the rain forest. Type "rain forest" into any search engine and you will have more material than you could ever use. Here are some sites to get you started:

Rain Forest Workshop

http://kids.osd.wednet.edu/Marshall/rainforest_home_page.html

White Jag

http://www.bcrescue.org/rainforests.html

Mayaquest

http://www.classroom.com/mayaquest/mayaquest97/default.htm

Your social studies textbook contains some very useful information for this activity in the very first chapter. There are also CD-ROM or traditional encyclopedias which will help you learn the facts about these ancient structures. Finally, there are also a number of very good books and educational videos on these structures.

LEARNING ADVICE:

You will find that the information from the different web sites will need additional research from other materials. You will also find it very important to work cooperatively with others in your group because one person cannot find all the necessary information in the time which your teacher has given you to do this work!

Make sure that you use your time wisely in and out of class!

EVALUATION:

You will be graded on your participation in your group and class discussions, your group's presentation of findings to the class and finally a short essay. You will write an opinion paper about what you feel ought to be done in the rain forest. You should address all the issues identified by the class commission and write what you feel is a good solution. You may have pretty expensive or unrealistic solutions, but you will be graded on how well you address the issues you have discovered rather than your solution's feasibility. You will receive one point for discussing each of the following issues:

- Brazil's economic problems ($)
- Mining gold in the rain forest
- Bugs and plants may have medicine(?)
- Trees for hamburger(?)
- Tribal people in the rain forest
- Global warming
- Your recommendation!

CONCLUSION:

After you have finished this activity, do the following as time and teacher direction allows:

As an art activity, contribute to a collection of student generated art and writing in a class book entitled, My Favorite Rain Forest Critter

Create a multimedia presentation about the rain forest using Hyperstudio and the information you have found.

REFLECTION:

1. What did you learn during this activity that surprised you the most?

2. How well did your group work together? Why is group research important in an activity like this?

3. How did the SCORE sites on the Internet help you complete this activity? Would you use the Internet again to find information?

4. The next time you do an activity such as this, what might you do differently?

5. Did you find some web sites which were not on the SCORE page that you would like to recommend for future students? Submit your recommendation in an email message to SCORE.

NOTES TO THE TEACHER:

Materials: Chart paper, pens, access to library with rain forest references, **access to Internet**, packet of authentic correspondence and reproducible. (Optional: Study Commission on the Rain Forest Hyper Studio Stack.)

Purpose: To motivate students to do independent research on the issues surrounding the rain forest.

Standards

Draft H/SS Standards Grade 10: Students describe the earth's natural spaces and the interplay between physical characteristics and historical developments ... including analyzing ways humans depend upon, adapt to, and affect the physical environment and the global effects of human modification of the physical environment.

Language Arts Standards - Listening and Speaking: Students formulate adroit judgments and deliver focused and coherent presentations of their own that convey clear and distinct perspectives and solid reasoning...[using] clear thesis statements and appropriate types of proofs.

Rationale: Students lose motivation to study subjects which are imposed by traditional methods such as lectures, book research and answering the questions at the end of the chapter. In this unit, students will take on the role of a committee which must make some difficult, yet informed decisions about a controversial subject, the disappearing rain forest.

Day 1 (allow at least one hour)

Give the students some basic information about the rain forest. Using a world map, show the students where tropical rain forests exist (generally between the Tropics of Cancer and Capricorn) Discuss with the students what one might find in a rain forest. Write down some ideas on the board as a brainstorm activity.

Hyper Studio Stack Option: If you have access to a computer in your classroom which is equipped with a Hyper Studio player, this option adds much to your whole class discussions. Hyper Studio is a presentation software program with cross-platform capabilities. A Hyper Studio project is a series of images or "cards" which are connected together by buttons, much like the Internet. These "cards" make up what is called a "stack". The Study Commission Stack allows you to display images to the class, simulate the consequences of their decisions and create a high-tech classroom environment which motivates students to participate. You may down-load a Hyper studio player at www.Hyperstudio.com or receive a free trial CD ROM sample, which includes a player, by calling 1-800-HYPERSTUDIO.

Authentic Correspondence

If the Hyper Studio Stack is not going to work for your classroom environment, the following is the text of the letters from the various characters of this simulation:

Brazilian Mining Company

Dear Commission on Rain Forests:

Please consider the interests of my country when making your

recommendation to the United Nations. Each year, we mine nearly 70 tons of gold from the rain forest areas of our country. With this gold we are able to purchase what we need to feed our families, build and maintain our roads and pay those who work so hard. If the rain forests become closed to mining, what would we do?

Sincerely,

Juan Gomez

President

U.S. University Bug Collectors

Dear Commission on Rain Forests:

During the past 3 years it has come to our attention that the leaf-cutter ant of the Brazilian rain forest has become more and more difficult to locate. It used to be that all we had to do was leave a bit of food lying around and we had all the leaf-cutters we could use. Now it takes as long as 6 hours to find enough ants to do our research.

We feel there are fewer leaf-cutters because of the logging operation which is clearing an area of rain forest the size of a football field every day.

Our research with these leaf-cutter ants is very important. What if these ants hold the cure for cancer or AIDS in their little bodies? Please do whatever it takes to stop the destruction of the rain forest.

Sincerely

I.M. Buggy

Government of Brazil

Dear Commission of Rain Forests:

It has come to my attention that everyone on this commission of yours is from the United States. Do you think this is fair? Your country has destroyed many of its own forests. How can you have the right to tell us how to use ours?

Besides this, 6% of the wood we get from the rain forest is sold to you in the United States where it is made into furniture and homes. And because of your love for hamburger, we clear more and more rain forest to make room for the cattle we raise in order to have enough beef for you to buy.

If you want to save the world, start at home!

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Sincerely,

The People of Brazil

The Yanomamo Tribe of Northern Brazil

Dear Commission:

My people are very afraid. For thousands of years we have lived from the rain forest. We use only what we need to live. Our way of life has not changed until very recently. We now hear the roar of big machines which knock down many trees a day. We fear our way of life is threatened. Please remember us and all the other tribes of the rain forest when you make your decision.

Sincerely,

Tua Lumpo

Space Station: Freedom

Dear Commission:

We have been observing all rain forested areas for a period of six weeks. Although we are alarmed at how much rain forest seems to be disappearing, we are not quite sure how this will effect the earth. Our scientists disagree.

Some feel that the increase of carbons in the air will cause global warming. Other scientists believe that the earth can recover from any warming because it will cause an increase of clouds which will cool the earth. We are not sure.

We can give you no definitive proof that the loss of rain forests will destroy the earth.

Sincerely,

Zeb Spacewalker

Role Cards

Spice up your classroom discussions and debates by having students role play characters who have interests in the rain forest. Here are some ideas:

Pedro Feliz: Gold Miner

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Juan has lived near the rain forest of Brazil all his life. His father was a gold miner before he was. His family has operated a gold mine for 45 years. Without the gold mine Juan's family and the 35 people who work for him have no way to make a living. Is it fair to close down his gold mine? Is he the only one destroying the rain forest?

I.M. Buggy: Bug Collector

Dr. Buggy has been traveling the Rain Forest looking for rare bugs for 10 years. He believes a new medicine could be found in leaf cutter ants. He used to be able to find plenty of these ants. Now he can only find a few as the rain forest seems to be disappearing. Dr. Buggy is worried about the rain forest and the ants. What if the cure for cancer or aids is being lost? What happens to the food chain if these ants disappear?

Tua Lumpu: Yanomamo Indian

Tua's family have lived on only what they find in the rain forest for thousands of years. His way of life is threatened. Many of his cousins from other Indian tribes have already moved into cities where they have trouble finding jobs and places to live. Why can't Tua live the way his family has always lived? When you cut down the rain forest, you cut down his home.

Jose Lopez: Cattle Rancher

Jose has lived as a poor farmer all his life. Now a man has come offering him thousands of dollars if he would raise more cattle. To do this he must cut down some rain forest to make room for his stock. All of his neighbors plan to do the same thing. Should he stay poor? Should he go ahead and raise more cattle for more money?

Proposed Solutions

Students will really want to resolve the issues of the rain forest. It is my opinion that the issue can not be resolved to the satisfaction of all interested. In the past, my students have come up with many interesting (although often impossible) solutions. Generally, the solutions fall into three categories:

1.Preserve All Rain Forests

This solutions cuts off all harvesting of rain forest products except for indigenous people (who take only what they need) and scientists (who take only what they need for research).

2.Create Rain Forest Reserves

This allows for some rain forest areas to be open to harvesting while protecting certain areas, particularly those areas with indigenous people.

3.Allow Nations to Decide for Themselves.

This option assumes each nation will do what is best for their own country. Each country can choose to create reserves or do whatever they feel would be in their own best interests.

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